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We claim:

1. A method for producing tetrahydroborates by using borates as chemical raw material, comprising:

reacting a mixture containing borate and alkali earth metal by heating in a hydrogen atmosphere under pressure below a reaction equilibrium pressure where hydride of the alkali earth metal exists in stable.

2. The method for producing tetrahydroborates as set forth in claim 1 wherein the alkali earth metal is magnesium.

3. The method for producing tetrahydroborates as set forth in claim 1 wherein the mixture contains hydrogenating catalyst to adsorb hydrogen.

4. The method for producing tetrahydroborates as set forth in claim 1 wherein the mixture is in form of fine powder.

5. The method for producing tetrahydroborates as set forth in claim 4 wherein the borate and the alkali earth metal respectively is pulverized of an average particle diameter of maximum 100μm.

6. The method for producing tetrahydroborates as set forth in claim 5 wherein the average particle diameters of both borate and alkali earth metal are generally the same.

7. The method for producing tetrahydroborates as set forth in claim 1 wherein coke oven gas is used as a source of hydrogen.

8. The method for producing tetrahydroborates as set forth in claim 1 wherein the mixture is provided with hydrogen atmosphere at temperature of maximum 450°C and heated to temperature of 500 to 650°C.

9. The method for producing tetrahydroborates as set forth in claim 1 wherein the tetrahydroborate produced is or include any one of a group consisting of sodium borohydride ($NaBH_4$), lithium borohydride ($LiBH_4$) and potassium borohydride (KBH_4).

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